

REMARKS

Claim 29 has been amended to specify method steps, namely contacting a test sample with a pair of primers and conducting an amplification reaction. Claim 29 has further been amended to specify that each of the primers comprises a sequence at an intron/exon boundary. Support for these amendments can be found at page 18, lines 5-15, page 20, lines 6-9 and page 56, lines 25-27. Claim 30 has been amended to depend from claim 29 and to specify the primer pairs originally set forth in claim 28. Claims 61 and 62 have been amended to refer to a minimum size of 23 and 25 nucleotides, respectively. Support for nucleic acids of this size can be found at page 30, lines 5-10 of the specification. It is believed that none of these amendments constitute new matter and their entry is requested.

The Examiner's objection to the Declaration is noted. Attached are copies of substitute Declarations executed by the inventors as filed in parent application Serial No. 09/135,010 on 20 April 2001.

Claim 29 was rejected under 35 USC §112, second paragraph as being incomplete. It is believed that the amendment of claim 29 to specify the structure of the primer pairs with respect to the intron/exon boundary of *KVLQT1* provides the necessary structure and obviates the rejection. Withdrawal of this rejection is requested.


Claims 29 and 30 were rejected under 35 USC §112, second paragraph as being indefinite. It is believed that the amendment of claim 29 to set forth method steps obviates this rejection. Withdrawal of the rejection is requested.

Claims 29 and 30 were rejected under 35 USC §101 as improper process claims. It is believed that the amendment of claim 29 to set forth method steps obviates this rejection. Withdrawal of the rejection is requested.

Claims 61 and 62 were rejected under 35 USC §102(b) as being anticipated by Santana et al. (*J. Bacteriol.* 176:6802-6811 (1994)) which discloses a peptide having 7 contiguous amino acids identical to 7 contiguous amino acids of *Xenopus* KVLQT1 polypeptide. It is believed that the amendment of the claims to refer to 23 or 25 nucleotides, greater than 21 nucleotides of the 7 contiguous amino acids, obviates this rejection. Withdrawal of this rejection is requested.

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In view of the amendments and above arguments, it is submitted that the present claims satisfy the provisions of the patent statutes and are patentable over the prior art. Reconsideration of this application and early notice of allowance are requested. The Examiner is invited to telephone the undersigned to expedite allowance of this application.

RESPECTFULLY SUBMITTED,					
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**Attachments:** Marked-Up Copy of Amendments  
Copies of substitute Declarations

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**Marked-Up Copy of Amended Claims**

29 (amended). A method of amplifying an exon of *KVLQT1* wherein said method comprises:  
a) contacting a test sample with [using] a pair of primers, wherein said pair of primers is useful for amplifying an exon of *KVLQT1* and each of said pair of primers comprises a nucleotide sequence at an intron/exon boundary;  
b) conducting an amplification reaction to amplify an exon of *KVLQT1*.

30 (amended). [A] The method of [amplifying an exon of *KVLQT1*] claim 29, wherein said [method comprises using a] pair of primers are selected from the group consisting of the primer pairs [of claim 28]

- a) SEQ ID NOs:41 and 42;
- b) SEQ ID NOs:43 and 44;
- c) SEQ ID NOs:45 and 46;
- d) SEQ ID NOs:47 and 48;
- e) SEQ ID NOs:49 and 50;
- f) SEQ ID NOs:51 and 52;
- g) SEQ ID NOs:53 and 54;
- h) SEQ ID NOs:55 and 56;
- i) SEQ ID NOs:57 and 58;
- j) SEQ ID NOs:59 and 60;
- k) SEQ ID NOs:61 and 62;
- l) SEQ ID NOs:63 and 64;
- m) SEQ ID NOs:65 and 66;
- n) SEQ ID NOs:67 and 68;
- o) SEQ ID NOs:69 and 70;
- p) SEQ ID NOs:71 and 72; and
- q) SEQ ID NOs:73 and 74.

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61 (twice amended). An isolated nucleic acid comprising any [15] 23 consecutive nucleotides of a nucleic acid encoding a *Xenopus* KVLQT1 polypeptide having the amino acid sequence set forth in SEQ ID NO:113 or its complement.

62 (twice amended). An isolated nucleic acid comprising any [12] 25 consecutive nucleotides of a nucleic acid encoding a *Xenopus* KVLQT1 polypeptide having the amino acid sequence set forth in SEQ ID NO:113 or its complement.

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